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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/520,133	03/07/2000	Yudhveer S. Bagga	1-1-1-1-1-1-1-3-1	1350

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Joseph B Ryan
Ryan & Mason LLP
90 Forest Avenue
Locust Valley, NY 11560

EXAMINER

BOUTAH, ALINA A

ART UNIT

PAPER NUMBER

2143

DATE MAILED: 02/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/520,133

Applicant(s)

BAGGA ET AL.

Examiner

Alina N Boutah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Lucent Technologies White Paper: “*Operations Architecture for Data-Centric Converged Telecommunications Networks: Lucent Technologies’ Open Operations CORBA Architecture*” by Dr. Mark H. Mortensen.

Regarding claim 1, Mortensen teaches a network management system comprising: an inter-domain configuration manager arranged between a set of one or more network service management applications and a plurality of network element domain managers, each of the domain managers being associated with a particular architectural or technological domain of a multi-layer network, the configuration manager implementing network service design and provisioning functions across a plurality of the domains of the network in conjunction with stored connectivity information characterizing the multi-layer network (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”; figures on page 8).

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Regarding claim 2, Mortensen teaches the system of claim 1 wherein the inter-domain configuration manager is interfaced to at least one of the set of network service management applications and the plurality of network element domain managers through a published Common Object Request Broker Architecture (CORBA) Application Programming Interface (API) (page 9, “*Interlayer Interfaces – CORBA’s the Key!*”).

Regarding claim 3, Mortensen teaches the system of claim 1 wherein the set of one or more network service management applications comprise one or more of an order manager, a trouble manager, a billing manager, a customer service manager, and a service level reporter (page 8, 2nd figure, “*Corporate Data Assets – Separating Data Repositories From Data Users (Applications)*”).

Regarding claim 4, Mortensen teaches the system of claim 1 wherein the domains of the multi-layer network comprise one or more of a circuit-switched domain, an Internet Protocol (IP) domain, an Asynchronous Transfer Mode (ATM) domain, a Frame Relay (FR) domain, a Synchronous Digital Hierarchy (SDH) domain, a Synchronous Optical Network (SONET) domain, and an optical domain (page 5, lines 9-19).

Regarding claim 5, Mortensen teaches the system of claim 1 wherein the inter-domain configuration manager provides single-point access to provisioning functions in a manner, which is independent of the corresponding domains (“*Getting Real – The Limitations of Interdomain Management*, last four lines).

Regarding claim 6, Mortensen teaches the system of claim 1 wherein the inter-domain configuration manager provides single-point access to end-to-end views of services and their underlying infrastructure, down to physical layer of the multi-layer network, in a manner which is independent of the corresponding domains (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”; “*Getting Real – The Limitations of Interdomain Management*”, last four lines).

Regarding claim 7, Mortensen teaches the system of claim 1 wherein the inter-domain configuration manager further comprises an inter-domain tree manager and an inter-domain provisioning manager (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”; “*Getting Real – The Limitations of Interdomain Management*”; page 7, lines 9-19).

Regarding claim 8, Mortensen teaches the system of claim 7 wherein the inter-domain tree manager maintains an end-to-end view of planned and provisioned transport services and facilities for the multi-layer network (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”; “*Getting Real – The Limitations of Interdomain Management*”; page 7, lines 9-19).

Regarding claim 9, Mortensen teaches the system of claim 7 wherein the inter-domain tree manager comprises a logical tree manager, a view manager, and a connectivity database for storing the connectivity information characterizing the multi-layer network (page 6, “*Solving the*

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Interdomain Problem – The Interdomain Manager (IDM)"; *"Getting Real – The Limitations of Interdomain Management"*; page 7, lines 9-19).

Regarding claim 10, Mortensen teaches the system of claim 9 wherein the logical tree manager manages end-to-end transport service and facility hierarchy, and maintains corresponding parent-child relationships in one or more tree structures that reference the domains containing real-time network details associated with the transport service and facility hierarchy (page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*; *"Getting Real – The Limitations of Interdomain Management"*; page 7, lines 9-19).

Regarding claim 11, Mortensen teaches the system of claim 9 wherein the view manager provides a plurality of different presentations of the network connectivity information, and provides a particular presentation associated with a tree structure stored by the logical tree manager upon receipt of a request for such a presentation (page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*; *"Getting Real – The Limitations of Interdomain Management"*; page 7, lines 9-19).

Regarding claim 12, Mortensen teaches the system of claim 7 wherein the inter-domain provisioning manager provides provisioning of services and facilities across the multiple domains (page 6, *"Solving the Interdomain Problem – The Interdomain Manager (IDM)"*; page 7, lines 9-19).

Regarding claim 13, Mortensen teaches the system of claim 7 wherein the inter-domain provisioning manager comprises an end-to-end design manager and an implementation manager (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”).

Regarding claim 14, the system of claim 13 wherein the end-to-end design manager provides network service design capabilities across the plurality of domains, utilizing a set of design rules for inter-domain connectivity, and coordinates designs among the domains in the particular inter-domain path page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”).

Regarding claim 15, Mortensen teaches the system of claim 13 wherein the implementation manager coordinates the implementation of an end-to-end network service design across the plurality of domains (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”).

Regarding claim 16, Mortensen teaches the system of claim 1 further comprising an inter-domain fault management associated with the inter-domain configuration manager and arranged between at least a subset of the network service management applications and at least a subset of the plurality of network element domain managers, the inter-domain fault manager providing fault management across the plurality of domains of the network (page 8, 1st figure, line 5).

Regarding claim 17, Mortensen teaches the system of claim 1 further comprising an inter-domain capacity manager associated with the inter-domain configuration manager and arranged between at least a subset of the network service management applications and at least a subset of the plurality of network element domain managers, the inter-domain manager providing management of transport capacity across the multi-layer network (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”; “*Getting Real – The Limitations of Interdomain Management*”; page 7, lines 9-19)

Regarding claim 18, Mortensen teaches a method of implementing a network management system, the method comprising the steps of:

providing an inter-domain configuration manager arranged between a set of one or more network service management applications and a plurality of network element domain managers, each of the domain managers being associated with a particular architectural or technological domain of a multi-layer network (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”; figures on page 8); and

utilizing the configuration manager to implement network service design and provisioning functions across a plurality of the domains of the network in conjunction with stored connectivity information characterizing the multi-layer network (page 6, “*Solving the Interdomain Problem – The Interdomain Manager (IDM)*”).

Regarding claim 19, Mortensen teaches a machine-readable medium storing one or more software programs for use in implementing a network management system, the one or more

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software programs when executed providing an inter-domain configuration manager arranged so as to interface with a set of one or more network service management applications and a plurality of network element domain managers, each of the domain managers being associated with a particular architectural or technological domain of a multi-layer network, the configuration manager implementing network service design and provisioning functions across a plurality of the domains of the network in conjunction with stored connectivity information characterizing the multi-layer network (page 6, "*Solving the Interdomain Problem – The Interdomain Manager (IDM)*"; figures on page 8).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. 6,330,601 French et al.
2. 6,260,062 Davis et al.
3. 6,289,201 Weber et al.
4. 6,400,689 Sato et al.
5. 5,768,501 Lewis, Lundy
6. ITU-T Recommendation G.805 "Digital Networks: Generic Functional
Architecture of Transport Networks." ITU 1996.
9. Mazumdar, Subrata. "Inter-Domain Management between CORBA and SNMP:
WEB-based Management - CORBA/SNMP Gateway Approach." Lucent
Technologies, 1996. Pages 1-16.

10. Shen, Chien-Chung; and Wei, John Y. "Network-Level Information Models for Integrated ATM/SONET/WDM Management." IEEE, 1998. Pages 176-185.
11. Shen, Chien-Chung; and Wei, John Y. "The Network as Distributed Object Database." IEEE, 1998. Pages 540-548.
12. Bjerring et al. "Experiences in developing mult-technology TMN systems." IEEE, 1998. Pages 445-454.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N Boutah whose telephone number is (703) 305-5104. The examiner can normally be reached on Monday-Friday (8:30 am-5:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-9112 for regular communications and (703) 305-3718 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

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ANB
January 28, 2003


DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100